

SYSTEMS AND METHODS FOR IN SITU SETTING CHARGE VOLTAGES IN A DUAL RECHARGE SYSTEM

Abstract

An in situ system and method for setting the charge voltages in a dual recharge color photocopier device includes a calculating an optimal DC grid voltage for each DC charging device of the dual recharge photocopier device. With the AC charging devices off, the photoreceptor belt is advanced to the first color station at a uniform residual voltage level. The DC charge device for the first color station charges the photoreceptor belt to a uniform voltage level. A non-contact voltmeter measures and stores the value read from the photoreceptor belt. An exposure device at the first color station exposes a portion of the photoreceptor belt to be read by the voltmeter at the next color station. The process continues through each color station, reading the voltage level of the portion of the photoreceptor belt exposed at the previous color station until voltage readings have been obtained for each color station. The process is repeated for several voltage levels so that data points are obtained for each voltage level for each DC charg-

ing device. The data points are used to calculate a DC slope and DC offset voltage for each DC charging device. At runtime of the photocopier, these values are used to calculate the ideal DC grid voltage for each DC charging device.